

Appl. No. 09/525,901  
Amtd. Dated April 30, 2003  
Reply to Office action of January 30, 2003  
Attorney Docket No. P10944/019949-001  
EUS/J/P/03-1037

### REMARKS/ARGUMENTS

#### **1.) Amendments**

The Applicant has cancelled Claims 1-10, and added Claims 11-20 to more particularly point out and distinctly claim the subject matter that Applicant regards as the invention. The scope of Claims 11-20 is commensurate with that of original Claims 1-10, wherein certain implicit limitations have now been made explicit. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

#### **2.) Claim Rejections – 35 U.S.C. § 102(e)**

The Examiner rejected Claims 1-10, under 35 U.S.C. 102(e), as being anticipated by United States Patent No. 6,018,659, issued to Ayyagari, *et al.* As noted *supra*, the scope of Claims 11-20 is commensurate with that of original Claims 1-10, wherein certain implicit limitations have now been made explicit. Accordingly, the Applicant will apply the Examiner's rejection of Claims 1-10 to new Claims 11-20.

In order for Ayyagari to anticipate the Applicant's claims, it must disclose each and every element of such claims - Ayyagari, however, fails to do so. Claim 11 recites:

11. A method of broadcasting information to mobile stations within a wireless telecommunications system, wherein said system includes a radio base station having an adaptive array antenna having a plurality of antenna elements, said method comprising the steps of:

determining the geographic position of a plurality of mobile stations subscribed to receive certain broadcast information;

generating a multicast data transmission signal including said broadcast information; and

feeding said multicast data transmission signal to each of said plurality of antenna elements of said adaptive array antenna, wherein the amplitude and phase of said signal delivered to each of said plurality of

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antenna elements is adjusted as a function of said geographic position of said plurality of mobile stations, whereby a signal beam is formed having a beam width sufficient to cover only the area substantially bounded by the geographic locations of said plurality of mobile stations. (emphasis added)

The Applicant's invention relates to broadcasting information to a plurality of mobile stations in a system that uses an adaptive array antenna having a plurality of antenna elements. Rather than transmitting such broadcast information separately to each mobile station by narrowly adjusting the beam of the adaptive array antenna to point *individually* at each mobile station, as such antennas are used conventionally, the geographic position is obtained for each of the mobile stations subscribed to receive the broadcast information, and the beam of the adaptive array antenna is formed to have a beam width sufficient to cover only the area substantially bounded by the geographic locations of such mobile stations; *i.e.*, this is accomplished by adjusting the amplitude and phase of the signal delivered to each of the plurality of antenna elements as a function of the geographic positions of the mobile stations.

Ayyagari relates to an airborne communication network. Although Ayyagari does discuss the use of an adaptive array antenna having a plurality of antenna elements (referred to by Ayyagari as a "directed beam antenna," such as a "phased array antenna"), it is in the context of the need for such steerable antennas for an airborne vehicle, which is constantly moving relative to one or more targets (whether a target is also airborne or terrestrial) to which the antenna is to transmit information. The focus of Ayyagari is communications between a moving airborne vehicle and a single target - or multiple targets at *different* times. This is noted with reference to Column 2, line 61 to Column 3, line 2:

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The airborne vehicle also includes a central processing unit for generating targeting signals according to the generated attitude reference information and position information and an assignor for assigning at least one transmit and at least one receive data channel of a predefined transmission scheme to each user, wherein data channel transmission and reception occur at different time intervals according to a predefined timing protocol. (emphasis added)

Thus, Ayyagari is not directed to broadcast transmission (i.e., the simultaneous transmission of information) to a plurality of mobile stations. Thus, with respect to Claim 11, Ayyagari does not disclose: 1) determining the geographic position of a plurality of mobile stations subscribed to receive certain broadcast information; 2) generating a multicast data transmission signal including such broadcast information; or 3) feeding the multicast data transmission signal to each of a plurality of antenna elements of an adaptive array antenna, wherein the amplitude and phase of the signal delivered to each of the plurality of antenna elements is adjusted as a function of the geographic position of the plurality of mobile stations, whereby a signal beam is formed having a beam width sufficient to cover only the area substantially bounded by the geographic locations of the plurality of mobile stations. Therefore, whereas Ayyagari fails to disclose each and every limitation of Claim 11, that claim is not anticipated.

Whereas Claim 16 recites limitations analogous to those of Claim 11, Ayyagari also fails to anticipate that claim. Furthermore, Ayyagari also fails to anticipate Claims 12-15 and 17-20, which are dependent from Claims 11 and 16, respectively, and include the limitations thereof. The Applicant, therefore, asserts that Claims 11-20 are not anticipated by Ayyagari.

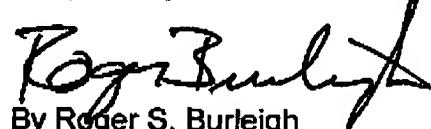
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### CONCLUSION

In view of the foregoing amendments and remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for Claims 11-20.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

  
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